



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Final Vapor Intrusion Technical Guides

FROM: Mathy Stanislaus
Assistant Administrator

A handwritten signature in blue ink, reading "Mathy Stanislaus", is placed over the printed name and title of the sender.

TO: Regional Superfund Division Directors
Regional UST Program Managers
Regional RCRA Division Directors
OSWER Office Directors

Purpose

This memorandum announces the publication of two guides pertaining to the vapor intrusion pathway:

- *OSWER Technical Guide For Assessing and Mitigating the Vapor Intrusion Pathway From Subsurface Vapor Sources to Indoor Air* [OSWER Publication 9200.2-154]; available on-line at <http://www.epa.gov/oswer/vaporintrusion/>; and
- *Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites* [EPA 510-R-15-001]; available on-line at www.epa.gov/oust/cat/pvi

These guides do not impose any requirements or obligations on the EPA, states or tribal governments, or the regulated community. Rather, the sources of authority and requirements for addressing subsurface vapor intrusion are the relevant statutes and regulations.

Background

Certain chemicals released into the subsurface environment may form hazardous vapors that migrate towards and enter buildings or other enclosed structures as a component of a gas. "Vapor intrusion" is the general term given to migration of hazardous vapors from any subsurface contaminant source, such as contaminated soil or groundwater or contaminated conduit(s), into an overlying building or structure. The intrusion of contaminant vapors into indoor spaces raises concern due to potential threats to safety (e.g., explosive concentrations of petroleum hydrocarbon vapors, etc.) and possible adverse health effects from inhalation exposure to vapor concentrations that may be toxic.

To help assess the subsurface vapor intrusion pathway, the Office of Solid Waste and Emergency Response (OSWER) released in November 2002, for public review and comment, a draft guide based on the understanding of vapor intrusion at that time. Since the EPA released the 2002 draft, the Agency's knowledge of and experience with vapor intrusion has increased considerably, leading to an improved understanding of and enhanced approaches for evaluating and mitigating vapor intrusion.

Objective

These two guides present the EPA's current recommendations for identification and consideration of key factors when assessing vapor intrusion, making risk management decisions, and implementing mitigation pertaining to this potential human exposure pathway. As such, they supersede and replace OSWER's 2002 draft vapor intrusion guidance.

One of the guides' main purposes is to promote national consistency in vapor intrusion evaluation activities. They do so, in part, by incorporating the EPA's traditional risk assessment and risk management paradigms. At the same time, they provide flexible and defensible science-based assessment approaches that accommodate different site circumstances as well as differences among pertinent EPA programs. In this way, the guides recognize and reflect that application of the EPA's statutory authorities to a particular situation generally entails site- and fact-specific analysis.

Implementation

The *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway From Subsurface Vapor Sources to Indoor Air* is intended for use at any site being evaluated by the EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended,¹ or the corrective action provisions of the Resource Conservation and Recovery Act (RCRA), as amended. It is also intended for use by the EPA's brownfield grantees, or state agencies acting pursuant to CERCLA or an authorized RCRA corrective action program where vapor intrusion may be of potential concern.

The *Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites* is intended for use at any site subject to petroleum contamination from underground storage tanks where vapor intrusion may be of potential concern.

Users of these guides should also be aware of applicable state requirements and guidance prior to conducting investigations and response actions for vapor intrusion. For the RCRA corrective action program most states and territories are authorized to carry out facility-wide activities. For the underground storage tank program states and territories are the primary implementers.

cc: Barry Breen, OSWER
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¹ Amendments to CERCLA include the Small Business Liability Relief and Brownfields Revitalization Act.